



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,240	05/30/2001	Mark C. Duhon	22.1397	8266

7590

11/21/2002

Patent Counsel  
SCHLUMBER RESERVOIR COMPLETIONS  
SCHLUMBERGER TECHNOLOGY CORPORATION  
P.O. BOX 1590  
ROSHARON, TX 77583

EXAMINER

HALFORD, BRIAN D

ART UNIT	PAPER NUMBER
----------	--------------

3672

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/871,240	Applicant(s) DUHON ET AL.	
	Examiner Brian D Halford	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2002.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 12-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>7</u> | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in–

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Wuenschel. Wuenschel discloses an apparatus for use in a wellbore, which contains an element formed of superplastic material that performs a downhole task. Specifically, Wuenschel discloses a deformable metal liner, fabricated of superplastic aluminum, which is capable of withstanding the attendant stresses associated with numerous detonations. As stated in lines 7-11 and 24-37 of Column 1, in concert with lines 11-38 of Column 2, a ductile or superplastic material is highly desired when performing downhole tasks such as geophysical exploration. The liner (14) is lucidly illustrated in Figure 2; moreover, line 47 of Column 5 discloses that the aluminum liner (14) can withstand an axial strain of 180% before failure, thereby satisfying the criterion for superplasticity. Additionally, lines 17-20 teach that failure of is a function of the

Art Unit: 3672

employed metal; in the instant case, aluminum will fail when the strain exceeds a critical value of 180%; however, Wuenschell teaches that other metals possess varying critical failure values—thus, other materials with higher critical values may be used in downhole apparatuses.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ohmer ('059).

Ohmer discloses an apparatus and method for establishing branch wells from a parent well. As mentioned in lines 29-67 and 1-18 of respective Columns 2 and 3, Ohmer realizes the establishment of branch wells by employing a branching sub that contains multiple outlet members. The branching sub is depicted in Figures 18A-18D; moreover, the constituents of the branching sub are clearly delineated in lines 6-64 of Column 14. Lines 54-59 of Column 14 disclose that the outlet members are fabricated from superplastic materials such as nickel-based alloys. As stated in the abstract, superplastic materials are employed to ensure that the outlet members possess a radius that is commensurate with the radius of the branching chamber.

4. Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Bosma *et al.* Bosma *et al.* disclose a method for sealing an annulus that involves the employment of a thermoplastic or superplastic material. Lines 51-62 of Column 5 disclose that heating of thermoplastic or superplastic material permits the material to fill the more irregular cross sections thereby ensuring a more robust seal. The heating device may include a circulating hot liquid or an electrical device capable of generating heat.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wuenschell or Ohmer ('059). It is noted by the Examiner that Applicant has failed to demonstrate the criticality of the superplastic material with respect to the numerous claimed species—the sand screen, the seal and so forth. Applicant merely shows that superplastic material possesses utility within well devices. Wuenschell and Ohmer each fail to teach the embodiments claimed in Claims 2-3 and 5-10; however, Wuenschell and Ohmer demonstrate the utility of superplastic materials for well apparatuses. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to construct the apparatuses of Claims 2-3 and 5-10 with a superplastic material, as taught by Wuenschell or Ohmer, to withstand high axial strain loads thereby promoting desired elongation and expansion without failure.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Ohmer ('532, '769) disclose the use of superplastic materials. The patent to Surjaatmadja *et al.* disclose the use of thermoplastic materials or superplastic materials. The patent applications to Metcalfe *et*

Art Unit: 3672

*a/.* disclose a method of plastically deforming a section of tubing and liner, respectively.

The patent application to Simpson discloses the use of plastically deforming a section of tubing. The patent to Castano-Mears *et al.* disclose an expandable well screen, which possesses increased torsional and tensile strength thereby satisfying the criterion for superplasticity.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Halford whose telephone number is (703) 306-0556. The examiner can normally be reached on M-F 8:30-6:00; alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (703) 308-2151. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1020.

  
David Bagnell  
SPE  
Art Unit 3672

BDH  
November 18, 2002